

NASA Stennis Space Center Environmental Resources Document

9.0 Insecticides and Herbicides

9.1 Regulatory Overview

Use, storage, delivery, and disposal of insecticides and herbicides is regulated by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). FIFRA outlines registration requirements for pesticide producers, certification requirements for pesticide applicators, , and directs EPA to set regulations for the acceptance of certain pesticides and recommended procedures for the disposal and storage of pesticides and pesticide containers. The EPA regulations are listed in 40 C.F.R. § 165. In addition to FIFRA, the Federal Food, Drug, and Cosmetic Act, the Mississippi Pesticide Application Law of 1975, and regulations enforced by the Mississippi Department of Agriculture and Commerce, Division of Plant Industry apply to insecticide and herbicide operations at SSC.

Presently, SSC utilizes the services of an off-site contractor for most insecticide and herbicide treatment operations at the facility. The degree of pest and vegetation control is maintained with minimal to no amounts of insecticides or herbicides stored on-site. The off-site subcontractor utilizes the proactive Integrated Pest Management Approach, which is targeted to minimize chemical usage. The subcontractor is responsible for waste handling and off-site disposal.

9.2 Insecticides and Herbicides at SSC

Pesticides include substances or mixtures of substances intended for preventing, destroying, repelling, or mitigating any pest. The targeted pests for SSC are inclusive but not limited to the following listing; flies, mosquitoes, gnats, roaches, fleas, spiders, termites, carpet beetles, fire ants, crickets, millipedes, annual and perennial grasses, and broadleaf weeds. Insecticides and herbicides are applied using a variety of methods, including pressurized spraying, aerosol spraying and manual placement. Table 9-1 summarizes the 2000 insecticide and herbicide usage at SSC. . Since the SSC Pesticide Program is subcontracted to off-site companies, there is limited work performed by on-site personnel. Since SSC has such a large Buffer Zone, which is a breed area for m, support for treatment is obtained through the Hancock County Mosquito Control Commission and the St. Tammany Mosquito Abatement District No. 2. The Hancock County Mosquito Control Commission also reports on light traps strategically located within the SSC Fee Area to aid in mosquito control efforts for the facility.

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9.3 Major Environmental Considerations for Proposed Actions

NASA Environmental Management shall be contacted for the following proposed actions: Actions that would alter the planned use of chemicals stored on site; actions that involve an increase application rate or the introduction of a new pesticide.

9.4 References

1. NASA, 1997, Pest Control Program Report.
2. J.B. Gordon, 1995, Personal Communication to C. Hall.

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Table 9-1
Projected Insecticide/Herbicide Usage at SSC

Insecticide/ Herbicide	Use	Application Method	Rate of Use	Usage Months	Areas to be Avoided	Application Sites
Air Devil (Cypermethrin)	Insects in cracks and crevices	Injection tube	1 second spray	Jan. - Dec.	Water, food, electronics	Cracks and crevices
Archer Insect Growth Regulator (Pyriproxyfen)	Fleas, roaches	Low pressure spray	1.0 ounce/gallon water	Jan. - Dec.	Food	Carpets, furniture, cabinets
Avert (Avermectin B1a)	Nymph and adult roaches	Hand duster	1 bait placement per 100 square feet	Jan. - Dec.	Exposure to food and utensil storage as well as dining areas	Offices, warehouses, labs, and cafeterias
Avert (Abamectin B1)	Nymph and adult roaches	Gel Bait	0.05% any rate	Jan.-Dec.	Aquatic areas, food and utensils	Offices, labs, warehouses, cabinets
Catalyst (Propetamphos)	Roaches and fleas	Sprayer	0.5% per 1500 square feet	Jan.-Dec.	Aquatic areas, food areas	Cracks and crevices
CB Wasp Freeze Wasp and Hornet Killer (Phenothlin)	Wasps and hornets	Aerosol Spray	1 gr. for 1,000 cu. feet	Mar. - Oct.	Food and utensils	Offices, labs, building entrances
Contrac Blox (Bromadiolone)	Rats and mice	Hand placement	3-16 ozs. of bait at intervals of 15 to 30 feet	Jan. - Dec.	Personnel and food	Offices, warehouses, food storage areas
Demand CS (Lambacyhalothrin)	Roaches and ants	Sprayer	0.4 oz / gallon water	Jan. - Dec.	Food, fish	Offices, warehouse, cafeterias
Diazinon 5G (Diazinon)	Ants and fleas	Granules	2-3 lbs. Per 1000 square feet	Jan.-Dec.	Aquatic areas	
Dragnet (Permethrin)	Termites	Ground spraying with low pressure sprayer	4 gallons per 10 linear feet	Depends on weather	Wildlife, streams	Around and under building structures
Drax Ant Kil Gel	Ants	Gel Bait	5.0%	Jan.-Dec.	Avoid food areas and water	Offices, buildings
Drione (Pyrethrins)	Roaches, ants, silverfish, fleas, and lice	Hand duster	16 ounces/ 1000 square feet	Jan. - Dec.	Exposure to food and utensils	Offices, warehouses, and cafeterias
Durs-Bait Mole Crickets (Chlorpyrifos)	Roaches, ants, and silverfish	Hand applied granules	3-1/2 lbs. per 1,000 sq. feet	Feb. - Aug.	Aquatic systems	Lawn and turf
Dursban 50W (Chlorpyrifos)	Fire ants, armyworms, centipedes, and cutworms	Emulsion sprayer	1/2 lb per acre	Mar. - Oct.	All aquatic systems	Lawn and turf

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Insecticide/ Herbicide	Use	Application Method	Rate of Use	Usage Months	Areas to be Avoided	Application Sites
Empire (Chlorpyrifos)	Roaches, ants, and silverfish	Ground application of hand pressurized sprayer	0.2 oz/gallon water	Jan. - Dec.	Food, utensils and personnel	Offices, labs, shops, and cafeterias
Entrap Roach and Ant Bait (Chlorpyrifos)	Roaches and ants	Granules	150 lbs / acre	Jan. - Dec.	Aquatic areas	Walkways, manholes, building entrances
Ficam W (Bendiocarb)	Fleas, spiders, termites, roaches, carpet beetles	Ground application of hand pressurized spray	0.4 oz / gallon water	Jan. - Dec.	Direct exposure to food, utensils, and personnel	Offices, labs, shops, and cafeterias
Fluorguard (Sulfonamide)	Ants	Bait Station	Bait Station	Jan. - Dec.	Food	Offices, shops, warehouse
Fyfanon (Malathion)	Roaches, ants, flies, mosquitos	Spray Mist	6-8 oz. Per 40 gallons	Jan.-Dec.	Water, streams, ponds, food areas	Lawn and turf
It Works (Boric acid)	Roaches, Ants, and Silverfish	Hand place on surface material	11 oz. / container (74.98 lbs / cubic feet)	Jan. - Dec.	Direct exposure to food and utensils	Offices, labs, cafeterias, and shops
Kicker EC (Pyrethins)	Flea, roach	Spray Mist	4.25 oz. Per gallon	Jan.-Dec.	Food areas	Lawn and turf
Max-Force (Hydramethylnon)	Adult roaches	Hand placement on surface material	4 to 6 bait trays per 100 sq.ft.	Jan. - Dec.	Direct exposure to personnel and food	Offices, labs, and cafeterias
Microcare (Pyrethrins)	Ants, spiders, and flies	Aerosol	1 linear foot/second	Jan. - Dec.	Food and utensils	Offices, labs, cafeteria
Outsmart (Boric Acid)	Ants	Gel Bait	6.25%	Jan.-Dec.	Food areas	Office, buildings, labs, shops
P.I. (Pyrethrin)	Roaches, ants, flies, mosquitoes	Aerosol	0.5%	Jan. - Dec.	Food and utensils	Offices
Pro Control Fogger (Pyrethrins)	Ants, fleas, mosquitoes, roaches	Aerosol	0.5%	Jan.-Dec.	Aquatic areas and food areas	Around buildings, office areas, shops
PT 280, Orthene (Acephate)	Roaches, ants, crickets, firebrats, earwigs, and pillbugs	Aerosol application of pressurized spray	1 linear foot / second	Jan. - Dec.	Food and utensil storage	Offices, labs, and cafeterias
Recruit 11 (Hexaflumuron)	Termites	Bait	0.5 grams per tube	Jan.-Dec.	Avoid aquatic areas	Around and under buildings
Reward Aquatic and Noncrop (Diquat)	Annual and perennial grasses, weeds	Pressure Spay	1 to 2 quarts per 100 gallons	Feb. - Sep.	Animals	Around buildings, edges, poles and pipelines
Round-up (Isopropylamine)	Annual and perennial grasses, weeds	Pressure Spray	2 ounces per gallon	Mar. - Dec.	Aquatic systems	Edge of buildings, pipelines

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Insecticide/ Herbicide	Use	Application Method	Rate of Use	Usage Months	Areas to be Avoided	Application Sites
Sentricon Recruit II (Hexaflumuron)	Termites	Bait Station	10 to 20 feet apart	Jan. - Dec.	Ponds, springs and other water	Offices, labs, buildings
Strikeforce HPX (Chlorpyrifos)	Roaches	Aerosol	0.5%	Jan.-Dec.	Aquatic Areas	Offices, labs, shops
Suspend SC (Deltamethrin)	Roaches and ants	Pressure Sprayer	0.4 oz / 1,000 sq. ft.	Jan. - Dec.	Fish habitat, food	Food storage areas, warehouse
Talgon G (Brodifacoum)	Mice	Pellets	1/4 to 1 lb of bait/infested area	Jan. - Dec.	Personnel and food	Food storage areas, offices, warehouses
Talstar (Bifenthrin)	Worms, crickets, fleas	Spray Mist	0.18-0.25 oz. Per 1000 square feet	Jan.-Dec.	Aquatic areas	Lawn and turf
ULD BP-300 (Pyrethrin)	Mosquitoes, flies, roaches	Spray mist	1 gal/2 gallon s oil	Jan. - Dec.	Streams, rivers, canals	Pine/Hardwood forest
Wasp Freeze (d-trans Allethrin)	Bees, hornets, yellowjackets	Aerosol	0.1%	Jan.-Dec.	Food areas, aquatic areas	Around structures and buildings
Yardex (Fluvalinate)	Fleas, ticks, ants	Granules	1.0%	Jan.-Dec.	Aquatic areas	Lawn and turf